REMARKS

Summary

Claims 1-6 were pending. Claims 2, 5, and 6 have been cancelled, Claims 1 and 4 rewritten, and Claims 7-16 added. The changes to the rewritten claims from the previous versions to the rewritten versions are shown in Appendix A, with strikethrough for deletions and underlines for additions. No new matter has been added as a result of this amendment. Claims 1, 3-4, and 7-16 are pending after entry of this amendment.

Objection to Specification

In the Office Action, the second full paragraph in the Description of the Preferred Embodiments section was objected to as being redundant with the Brief Description of the Drawings section. Applicant has cancelled the second full paragraph in the Description of the Preferred Embodiments section and respectfully requests that the Examiner withdraw the objection.

Rejection of Claims

In the Office Action, Claim 1 was rejected under 35 U.S.C. §102(b) as being anticipated by Conti (U.S. Patent 4,777,654) Claim 3 was rejected under 35 U.S.C. §103(a) as being unpatentable over Conti in view of Hirota (U.S. Patent 5,311,154), and Claims 2 and 4-5 were rejected under 35 U.S.C. §103(a) as being unpatentable over Conti in view of Shiomi (U.S. Patent 4,608,713).

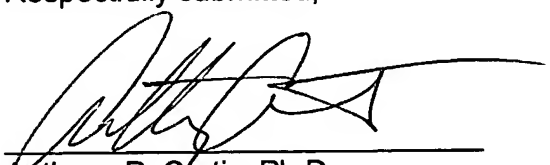
Claim 6 was objected to as being dependent on a rejected base claim but the Examiner indicated it would be allowable if rewritten in an independent form including all of the limitations of the base claim and any intervening claims. Applicant has amended Claim 1 to incorporate the limitations of Claim 6, along with intervening Claims 2 and 5. Applicant submits that amended Claim 1 as well as dependent Claims 3-4 and 7-16 are in condition for allowance.

Conclusion

In view of the amendments and arguments above, Applicant respectfully submits that all of the pending claims are in condition for allowance and seeks an early allowance thereof. If for any reason the Examiner is unable to allow the

application in the next Office Action and believes that a telephone interview would be helpful to resolve any remaining issues, he is respectfully requested to contact the undersigned.

Respectfully submitted,



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APPENDIX A
Waveguide for Microwave Device
Serial No. 10/068,432
Inventor Hideki Kondo

In the Specification

Please amend the paragraph beginning on page 12, line 20 and ending on page 13, line 12 as follows:

The second circuit board 38 is fixed to the inner bottom surface of the sub-casing 32 by screwing a plurality of metal fixing members 41. The fixing members 41 divide the second circuit board 38 into a plurality of areas. Although not shown in the drawings, the frequency converter 20 and the band-pass filters 21 and 23 among the circuit components of the hybrid power-amplifier circuit 3 are each mounted on the corresponding areas of the second circuit board 38. A probe 42 as the output terminal 26 protrudes into the second waveguide groove 40 of the sub-casing 32 from one end of the second circuit board 38. Because of the requirement for providing a large amplification, all the other circuit components, i.e., the power amplifiers 22, ~~23~~ 24 and 25, comprise bare semiconductor chips 43. These bare semiconductor chips 43 are inserted in the corresponding through-holes 38a provided in the second circuit board 38, are bonded to the inner bottom surface of the sub-casing 32 with a conductive adhesive, and are connected to a conductive pattern (not shown) on the second circuit board 38 by wire bonding.

Please amend the paragraph beginning on page 13, line 13 and ending on page 14, line 17 as follows:

The radiation plate 33 has a protrusion 33a, the width of which is formed slightly smaller than that of the opening 30a of the main casing 30. The sub-casing 32 and the radiation plate 33 are integrally bonded at the bottom of the sub-casing 32 and the top of the protrusion 33a, a radiation sheet 44 being interposed therebetween, thus forming the unified radiator 31 as described above. The adhesive radiation sheet 44 composed of, e.g., a silicone based resin, smoothes fine irregularities on the contact surface between the sub-casing 32 and the radiation plate 33. As shown in Fig. 7, while being inserted into the opening 30a, the radiator 31 is screwed to the bottom of the main casing 30 such that slight gaps G are

maintained between the sidewalls of the protrusion 33a of the radiation plate ~~radiator~~ 33 and those of the opening 30a of the main casing 30 in order that the protrusion 33a of the radiation plate 33 does not come into contact with the main casing 30. Further, as shown in Fig. 8, the main casing 30 has pluralities of depressions 45 and projections 46 which are alternately formed on the bottom of the main casing 30 with the opening 30a interposing therebetween. The projections 46 serve as contact surfaces between the bottom of the main casing 30 and the radiation plate 33 so as to join the main casing 30 and the radiation plate 33. The depressions 45, each being placed between adjacent projections 46, reduce the contact area between the bottom of the main casing 30 and the radiation plate 33, thereby reducing the amount of heat transfer from the radiation plate 33 to the main casing 30.

In the Claims:

Please amend Claims 1 and 4 as follows:

1. (Twice Amended) A waveguide for a microwave device, comprising:

a frame housing a high-frequency circuit therein, the frame comprising a main casing housing a first circuit board and a sub-casing housing a second circuit board; and

a lid attached to a sidewall of the frame,

wherein the main casing has a cut-out formed in the sidewall to which the lid is attached, the sub-casing arranged inside the main casing has a sidewall which is exposed at the cut-out, both the main casing and the sub-casing have waveguide grooves formed in the respective sidewalls, ~~at least one of the frame and the lid has a waveguide groove formed therein and extending~~ the waveguide grooves extend along a mating surface between the frame and the lid, the lid has a flat surface to cover the waveguide grooves, and the second circuit board has a probe provided thereon, the probe protruding into the waveguide groove of the sub-casing.

4. (Twice Amended) The waveguide according to Claim ~~2~~1, wherein the sub-casing is arranged inside four sidewalls of the main casing and the main casing has a through-hole, through which the probe passes, formed in the sidewall to which the lid is attached.